Application No. 09/655,093
Filing Date   09/05/2000   Atty. Docket JP920000177US1

IN THE CLAIMS

1. (currently amended) In a computing system comprising a ~~of~~ plurality of clients and boot servers ~~of a particular type~~, and a ~~single~~ DHCP/PXE server, a method in said DHCP/PXE server for allocating a boot server to a ~~each~~ requesting client characterized in that a ~~the~~ least loaded boot server is prioritized for service by:

- maintaining a boot Server Allocation Table (SAT) containing a listing of boot servers and an ~~the~~ existing client load count for each boot server,
- maintaining a Client Allocation Table (CAT) associating ~~each~~ client IP addresses with ~~the~~ corresponding boot server IP addresses,
- prioritizing the boot servers by sorting said listing ~~SAT~~ in an ordered sequence of increasing load count whenever one of the load counts ~~it~~ is updated, and
- providing the IP addresses of the boot servers in the sequence of their listing in said SAT for access whenever a client requests the DHCP/PXE server, wherein said SAT is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and wherein said CAT is updated to include an entry associating the requesting client with a particular boot server IP address whenever a boot server sends an ACK to the requesting client.

2 - 3. (canceled)

4. (currently amended) A method as claimed in claim 1 wherein said CAT is updated to remove an entry corresponding to a particular client whenever the DHCP/PXE server ~~refreshes it's IP addresses pool and~~ discovers that said client is not available.

2

5. (currently amended)   A method as claimed in claim 1 In a computing system comprising a
plurality of clients and boot servers, and a DHCP/PXE server, a method in said
DHCP/PXE server for allocating a boot server to a requesting client characterized in that
a least loaded boot server is prioritized for service by:

- maintaining a boot Server Allocation Table (SAT) containing a listing of boot
  servers and an existing client load count for each boot server,

- maintaining a Client Allocation Table (CAT) associating client IP addresses with
  corresponding boot server IP addresses,

- prioritizing the boot servers by sorting said listing in an ordered sequence of
  increasing load count whenever the load count is updated, and

- providing the IP addresses of the boot servers in the sequence of their listing in
  said SAT for access whenever a client requests the DHCP/PXE server, wherein
  said SAT is updated to increment a particular boot server load count whenever
  that boot server sends an acknowledge (ACK) to a requesting client and wherein
  said SAT is updated to decrement the load count for on a particular boot server
  using the association between the client and server given in the CAT whenever
  the DHCP/PXE server refreshes it's IP addresses pool and discovers that said
  client is not available.

6. (currently amended)   A method as claimed in claim 1 In a computing system comprising a
plurality of clients and boot servers, and a DHCP/PXE server, a method in said
DHCP/PXE server for allocating a boot server to a requesting client characterized in that
a least loaded boot server is prioritized for service by:

- maintaining a boot Server Allocation Table (SAT) containing a listing of boot
  servers and an existing client load count for each boot server,

- maintaining a Client Allocation Table (CAT) associating client IP addresses with
  corresponding boot server IP addresses,

- prioritizing the boot servers by sorting said listing in an ordered sequence of
  increasing load count whenever the load count is updated, and

3

- providing the IP addresses of the boot servers in the sequence of their listing in said SAT for access whenever a client requests the DHCP/PXE server, wherein said SAT is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and wherein the boot Server Allocation Table (SAT) contains the boot server IP addresses and the counts of the number of times the boot servers are is used for booting up a clienton the network.

7. (canceled)

8. (currently amended) A computing system comprising a of plurality of clients and boot servers of a particular type, and a single DHCP/PXE server, a system in said DHCP/PXE server for allocating a boot server to a each requesting client characterized in that a the least loaded boot server is prioritized for service by:

   - a boot Server Allocation Table (SAT) means containing a listing of boot servers and an the existing client load count for each boot server,

   - a Client Allocation Table (CAT) means for associating each client IP addresses with the corresponding boot server IP addresses,

   - means for prioritizing the boot servers by sorting said listing SAT means in an ordered sequence of increasing load count whenever one of the load counts it is updated, and

   - means for providing the IP addresses of the boot servers in the sequence of their listing in said SAT means for access whenever a client requests the DHCP/PXE server, wherein said SAT means is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and wherein said CAT means is updated to include an entry associating the requesting client with a particular boot server IP address whenever a boot server sends an ACK to the requesting client.

9 - 10. (canceled)

4

Application No. 09/655,093   Atty. Docket JP920000177US1
Filing Date   09/05/2000

11. (currently amended) A system as claimed in claim 8 wherein said CAT means is updated to
remove an entry corresponding to a particular client whenever the DHCP/PXE server
~~refreshes it's IP addresses pool and~~ discovers that said client is not available.

12. (currently amended) ~~A system as claimed in claim 8~~ A computing system comprising a
plurality of clients and boot servers, and a DHCP/PXE server, a system in said
DHCP/PXE server for allocating a boot server to a requesting client characterized in that
a least loaded boot server is prioritized for service by:
-       a boot Server Allocation Table (SAT) means containing a listing of boot servers
        and an existing client load count for each boot server,
-       a Client Allocation Table (CAT) means for associating client IP addresses with
        corresponding boot server IP addresses,
-       means for prioritizing the boot servers by sorting said listing in an ordered
        sequence of increasing load count whenever one of the load counts is updated, and
-       means for providing the IP addresses of the boot servers in the sequence of their
        listing in said SAT means for access whenever a client requests the DHCP/PXE
        server, wherein said SAT means is updated to increment a particular boot server
        load count whenever that boot server sends an acknowledge (ACK) to a
        requesting client and wherein said SAT means is updated to decrement the load
        count for ~~on~~ a particular boot server using the association between the client and
        server given in the CAT whenever the DHCP/PXE server ~~refreshes it's IP
        addresses pool and~~ discovers that said client is not available.

5

Application No. 09/655,093   Atty. Docket JP920000177US1
Filing Date   09/05/2000

13. (currently amended) ~~A system as claimed in claim 8~~ A computing system comprising a plurality of clients and boot servers, and a DHCP/PXE server, a system in said DHCP/PXE server for allocating a boot server to a requesting client characterized in that a least loaded boot server is prioritized for service by:

- a boot Server Allocation Table (SAT) means containing a listing of boot servers and an existing client load count for each boot server,

- a Client Allocation Table (CAT) means for associating client IP addresses with corresponding boot server IP addresses,

- means for prioritizing the boot servers by sorting said listing in an ordered sequence of increasing load count whenever one of the load counts is updated, and

- means for providing the IP addresses of the boot servers in the sequence of their listing in said SAT means for access whenever a client requests the DHCP/PXE server, wherein said SAT means is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and wherein the boot Server Allocation Table (SAT) means contains the boot server IP addresses and ~~the~~ counts of ~~the number of~~ times the servers are ~~is~~ used for booting up a client ~~on the network~~.

6

Application No. 09/655,093   Atty. Docket JP920000177US1
Filing Date   09/05/2000

14. (currently amended) A computer program product comprising a computer storage medium having computer readable code means, the computer readable code means comprising:

- a boot Server Allocation Table (SAT) means containing a listing of boot servers and an the existing client load count for each boot server,
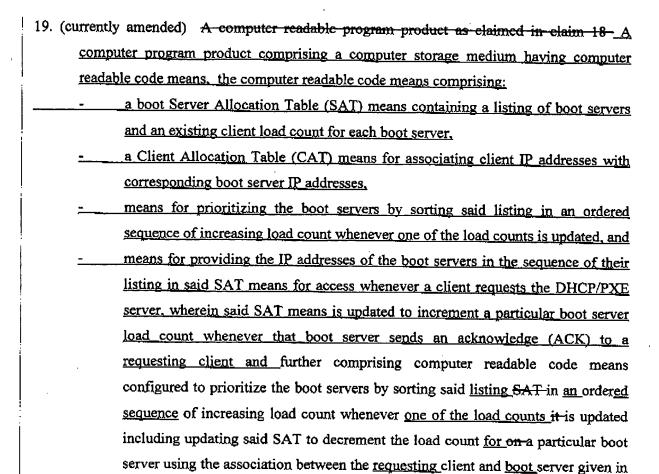
- a Client Allocation Table (CAT) means for associating each client IP addresses with the corresponding boot server IP addresses,

- means for prioritizing the boot servers by sorting said listing SAT means in an ordered sequence of increasing load count whenever one of the load counts it is updated, and

- means for providing the IP addresses of the boot servers in the sequence of their listing in said SAT means for access whenever a client requests the DHCP/PXE server, wherein said SAT means is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and wherein the CAT means is updated to include an entry associating the requesting client with a particular boot server IP address whenever a boot server sends an ACK to the client.

15 - 16. (canceled)

17. (currently amended) A computer readable program product as claimed in claim 14 16 wherein said computer readable code means also updates said CAT to remove an entry corresponding to a particular client whenever the DHCP/PXE server refreshes its IP addresses pool and discovers that said client is not available.

18. (canceled)

7

Application No. 09/655,093
Filing Date 09/05/2000

Atty. Docket JP920000177US1

19. (currently amended) ~~A computer readable program product as claimed in claim 18.~~ A computer program product comprising a computer storage medium having computer readable code means, the computer readable code means comprising:

- a boot Server Allocation Table (SAT) means containing a listing of boot servers and an existing client load count for each boot server,

- a Client Allocation Table (CAT) means for associating client IP addresses with corresponding boot server IP addresses,

- means for prioritizing the boot servers by sorting said listing in an ordered sequence of increasing load count whenever one of the load counts is updated, and

- means for providing the IP addresses of the boot servers in the sequence of their listing in said SAT means for access whenever a client requests the DHCP/PXE server, wherein said SAT means is updated to increment a particular boot server load count whenever that boot server sends an acknowledge (ACK) to a requesting client and further comprising computer readable code means configured to prioritize the boot servers by sorting said listing ~~SAT~~ in an ordered sequence of increasing load count whenever one of the load counts ~~it~~ is updated including updating said SAT to decrement the load count for ~~on~~ a particular boot server using the association between the requesting client and boot server given in the CAT whenever the DHCP/PXE server ~~refreshes its IP addresses pool and~~ discovers that said client is not available.

8

(